step 6: drying said slurry at 80-— 120 “C, then sieving the powders , pressing them into pellets;

step 7: sintering said pellets at 870—-950Cfor 2-6h, obtaining the said hyper frequency MLCI materials.

3.(Original) A method of preparing the hfMLCI materials as described in claim I comprising the following steps:

a) synthesizing Z-type planar hexaferrite using organic iron salt such as iron citrate as raw materials:

step 1: dissolving iron citrate into aqueous solution, before mixing with barium, cobalt, zinc, copper and manganese acetate or nitrate salts in stoichiometric quantities to get a mixed solution;

step 2: dropping appropriate amount of ammonia solution into the said mixed solution to make it neutral or slightly alkaline (pH=6-8), obtaining a steady sol;

step 3: drying the said sol at 130 to 150 “C for 6 to 1 Oh, then heating treated between 900-—120”C for 6h, resulting in Z-type hexaferrite powders;

b) the sintering aids being mixed with hexaferrite powders by conventional ceramic route:

step 4: mixing the said hexaferrite powders with sintering aids oxides Bi2O3 V205 in a ball mill for 4 hours according the composition mentioned above during a medium of water or alcohol to form a slurry;

step 5: drying said slurry at 80—I 20C, then sieving the powders , pressing them into pellets;

step 6: sintering said pellets at 870—˜90"C for 2-6h, obtaining the said hyper frequency MLCI materials.

4.(Original) A method of preparing the hf MLCI materials as described in claim 1 comprising the following steps:

a) synthesizing Z-type planar hexaferrite using inorganic iron salt as raw materials:

step 1: putting Fe^{3+} iron salt into an aqueous solution before being precipitated by a ammonia solution to form precipitate Fe(OH)3.

step 2: after filtering, washing, dissolving the fresh Fe(OH)3 precipitate into hot citric acid solution at 60-—80"Cwith Fe/citric acid mole ratio in 1 to 2, obtaining a transparent solution;

step 3: putting cobalt, barium, zinc, copper and manganese acetate or nitrate salts in stoichiometric quantities to said solution in step 2, and then dropping an appropriate ammonia until the said solution being neutral or slightly alkaline (pH6-8) for 2 hours to give a stable sol containing the required Co2Z type hexaferrite composition;

step 4: drying said sol at 130-150"C for 6˜10h, and then heating-treated at a temperature between 900 to 1250"C for 6h, resulting in Z-type hexaferrite powders;

b) the sintering aids being added into hexaferrite powders by chemical coating route as the following:

step 5: dispersing the said hexaferrite powders into ethylene glycol to form a slurry, blending the sintering aids in water-soluble forms into the slurry, adjusting pH value of the mixed slurry so as to the sintering aids coating on the surface of hexaferrite

particles in forms of hydroxides;

step 6: after drying the mixed slurry, calcining it at 700"C for 2h to form a second hexaferrite powders containing sintering aids;

step 7: sieving, pressing the second powders and sintering them at 870~950C for 6h, obtaining the invented hyper frequency MLCI materials.

5. (Original) A method of preparing the hf MLCI materials as described in claim 1 comprising the following steps:

a) synthesizing Z-type planar hexaferrite using organic iron salt such as iron citrate as raw materials:

step 1: dissolving iron citrate into aqueous solution, before mixing with barium, cobalt, zinc, copper and manganese acetate or nitrate salts in stoichiometric quantities to get a mixed solution;

step 2: dropping appropriate amount of ammonia solution into the said mixed solution for 6 to 8 hours to make it neutral or slightly alkaline (pH=6-8), obtaining a steady sol;

step 3: drying the said sol at 130 to 150 "C for 6 to 1 Oh, then heating treated between 900~1250"C for 6h, resulting in Z-type hexaferrite powders;

b) the sintering aids being added into hexaferrite powders by chemical coating route as the following:

step 4: dispersing the said hexaferrite powders into ethylene glycol to form a slurry, blending the sintering aids in water-soluble forms into the slurry, adjusting pH value of the mixed slurry so as to the sintering aids coating on the surface of hexaferrite

particles in forms of hydroxides;

step 5: after drying the mixed slurry, calcining it at 700 "C for 2h to form a second hexaferrite powders containing sintering aids;

s step 6: sieving, pressing the second powders and sintering them at 870~950"C for 6h, obtaining the invented hyper frequency MLCI materials.

6.(New) A composition of hyper frequency multilayer chip inductors materials comprising:

a major component Z-type planar hexaferrite as following:

$Ba_3Co_{2-x-y}Zn_xCu_yMn_zFe_{24-z-w}O_{41-3/2(z+w)}$,

wherein:

$0 \leq x \leq 1.0$; $0 \leq y \leq 0.8$; $0 < z \leq 1.0$; and $0 \leq w \leq 1.0$; and

a minor component used as a sintering aid as following:

a Bi_2O_3 + bV_2O_5 + c PbO + d B_2O_3 + e LiF + f CaF_2,

wherein:

$0 \leq a \leq 1$; $0 \leq b \leq 1$; $0 \leq c \leq 1$; $0 \leq d \leq 1$; $0 \leq e \leq 1$; $0 \leq f \leq 1$;

wherein the weight ratio of the major component to the minor component is between 98:2 to 88:12.

7. (New) The composition of claim 6 wherein a=0; b=0.

8. (New) The composition of claim 7 wherein 0<c <1.

9. (New) The composition of claim 7 wherein 0<d<1.